Examiner Copy

1. A lipid-based drug delivery system for administering an active lysolipid drug substance, which is not a substrate for lysophospholipase, to tissues expressing increased levels of extracellular phospholipase A2, comprising:

(a) a prodrug lipid derivative having:

(1) An alkyl-linked aliphatic group of a length of at least 7 carbon atoms;

(2) An acyl-linked organic radical having at least 7 carbon atoms, and

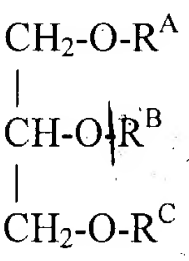
(3) A hydrophilic moiety, and

(b) at least one lipopolymer or glycolipid.

15. A method for selectively drug targeting to neoplastic cells within a mammal having an extracellular phospholipase A2 activity which is at least 25% higher compared to the normal activity in said areas, by administering to the mammal in need thereof an efficient amount of the lipid-based drug delivery system according to claim 1.

57. A lipid-based drug delivery system for administering an active lysolipid drug substance, which is not a substrate for lysophospholipase, to tissues expressing increased levels of extracellular phospholipase A2, comprising:

(a) a prodrug lipid derivative having the formula:



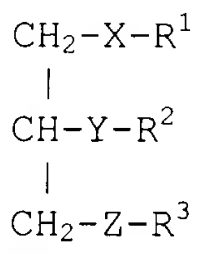
wherein $R^A$ is an ether-linked fatty acid chain having at least 7 carbon atoms, $R^B$ is an acyl-linked fatty acid chain having at least 7 carbon atoms and $R^C$ is chosen from the group consisting of phosphatidic acid, phosphatidyl choline, phosphatidyl glycerol and phosphatidyl serine; and

(b) at least one lipopolymer or glycolipid.

64. A method for selectively drug targeting to neoplastic cells within a mammalian body having a extracellular phospholipase A2 activity which is at least 25% higher compared to the normal activity in said areas, by administering to the mammal in need thereof an efficient amount of the lipid-based drug delivery system according to claim 57.

72. A lipid-based drug delivery system for administering an active lysolipid drug substance, which is not a substrate for lysophospholipase, to tissues expressing increased levels of extracellular phospholipase A2, comprising:

(a) a prodrug lipid derivative having the formula:



wherein

X and Z are O;

Y is -OC(O)-, Y then being connected to $R^2$ via either the oxygen or carbonyl carbon atom;

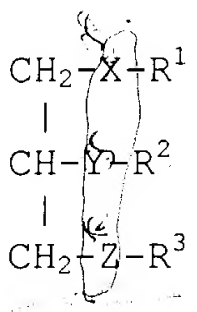
$R^1$ and $R^2$ are each independently an alkyl group $(CH_2)_nCH_3$, where n is any one of 11-29; and

$R^3$ is an acyl-linked fatty acid chain having at least 7 carbon atoms and $R^c$ is chosen from the group consisting of phosphatidic acid, phosphatidyl choline, phosphatidyl glycerol and phosphatidyl serine; and

(b) at least one lipopolymer or glycolipid.

71. A lipid-based drug delivery system for administering an active lysolipid drug substance, which is not a substrate for lysophospholipase, to tissues expressing increased levels of extracellular phospholipase A2, comprising:

(a) a prodrug lipid derivative having the formula:



wherein

X and Z independently are selected from O, $CH_2$, NH, NMe, S, S(O), and $S(O)_2$;

Y is -OC(O)-, Y then being connected to $R^2$ via either the oxygen or carbonyl carbon atom;

$R^1$ is an aliphatic group of the formula $Y^1Y^2$; where $Y^1$ is $-(CH_2)_{n1}-(CH=CH)_{n2}-(CH_2)_{n3}-(CH=CH)_{n4}-(CH_2)_{n5}-(CH=CH)_{n6}-(CH_2)_{n7}-(CH=CH)_{n8r}-(CH_2)_{n9}$, and the sum of n1+2n2+n3+2n4+n5+2n6+n7+2n8+n9 is an integer of from 9 to 29; n1 is zero or an integer of from 1 to 29, n3 is zero or an integer of from 1 to 20, n5 is zero or an integer of from 1 to 17, n7 is zero or an integer of from 1 to 14, and n9 is zero or an integer of from 1 to 11; and each of n2, n4, n6 and n8 is independently zero or 1; and $Y^2$ is $CH_3$ or $CO_2H$; where each $Y^1$-$Y^2$ independently may be substituted with halogen or $C_{1-4}$-alkyl,

$R^2$ an alkyl group $(CH_2)_nCH_3$ where n is any one of 11-29; and

$R^3$ is an acyl-linked fatty acid chain having at least 7 carbon atoms and $R^c$ is chosen from the group consisting of phosphatidic acid, phosphatidyl choline, phosphatidyl glycerol and phosphatidyl serine; and

(b) at least one lipopolymer or glycolipid.